GAMIFICATION AS A METHOD TO CO-DESIGN PLAY WITH CHILDREN

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The scope of my project was investigating and identifying how the topic of Gamification can be applied as a method to engage children within a co-design process. As a case study for testing this method I focused on the context of how children in the area of Burnhill in Glasgow can co-design play within their local neighbourhoods. The intention of the chosen context was to provide a specific area that the Gamified methods tools & activities could be prototyped for and within, which is why my primary research was focussed around one specific group of children.
My project focusses on investigating and identify how the topic of Gamification can be applied as a method to engage children within the context of co-design process.

PROJECT OBJECTIVES

IDENTIFY THE NATURE OF GAMIFICATION & ITS ROLE WITHIN CO-DESIGN.

IDENTIFY HOW A COMMUNITY CHILDRENS GROUP CURRENTLY OPERATES.

TESTING A GAMIFIED SET OF ACTIVITIES WITH A COMMUNITY CHILDRENS GROUP.
Methodology & Process

1. Desk Research
2. Desk Research
3. Stakeholder Mapping
4. Fieldwork
5. Ideation
6. Fieldwork + Prototyping
7. Final Concept + Reflection
8. Co-Design Session
9. Stakeholder Mapping
10. Desk Research
11. Define Context
12. Define Context

Explore
Develop
Implement
The methodology for my project followed three main phases; Explore Develop and Implement that followed an iterative pattern as the project progressed. The Explore phase focussed on scoping the project through investigation and synthesis of secondary research on the topic of Gamification and co-design practices. In this Explore phase through analysis I was able to Define a set of design guidelines as a generic framework to take forward to the second phase called Develop. This Develop phase included the ideation of Gamified concept co-design methods using this generic framework. Once I had generated my concepts I went back to the Explore phase for a second stage of research and collected further field data with a specific group of children in the Burnhill area in order to gain further insight. Once I had collected this data I returned to the Develop phase and analysed this data in order to Refine my concept methods to better suit the children and context it was being tested within. The final Implement phase included the testing of my prototype method and evaluating it based upon the children’s engagement, performance and cooperation. This evaluation was reflected in a final iteration where I was able to Refine my method and further Develop it towards a speculation as to how it could better support engagement with the Burnhill Children’s group.
EXPLORE
01
GAMIFICATION & CO-DESIGN

TOPIC
DESK RESEARCH
In the Explore phase the topic and context was separated in order to firstly frame the nature of Gamification as my topic. Identify its current role within co-design practices and understand where children fit within co-design activities. Then secondly identify a specific context and conduct fieldwork with a specific group of children that would participate in the testing of my prototype method. This separation of context and topic was done in order to understand the potential of Gamification in the design process and provide insight into what has previously worked. Then gain insight from a specific group within my context in order to develop a method influenced from desk and designed for as specific type of group.
GAMIFICATION FOCUS

IDENTIFY THE NATURE OF GAMIFICATION?

IDENTIFY THE NATURE OF GAMIFIED METHODS IN THE CO-DESIGN PROCESS?

IDENTIFY THE ROLE OF CHILDREN WITHIN THE CO-DESIGN PROCESS?
Gamification has often been referred to as applying “game mechanics, game thinking and game design elements into non-game contexts” (Deterding et al. 2011). Gamification can be seen as either a “strategy of using game design elements” or a “goal of designing for gamefulness”. In Gamification there is often an overuse and sometimes abuse of the formalised and rule based ludic approach (Walz et al. 2014) in services and marketing from shopping to websites, however, this approach also lacks the affordances for natural free flowing playful behaviours often referred as the opposing pole paidia (Deterding et al, 2011). This notion of gamefulness or gameful interaction and design has been described as a possible balance between the two poles of play (Caillois, 1961) promoting experiential qualities as a complement to playfulness (Deterding et al. 2011). Gamification “can be designed to introduce clear goals and feed-
back, and challenges that can be tailored to match the abilities of the user”, which can be some of the qualities needed to help the user achieve the experience of flow (Knaving et al. 2013). The ludification of culture and society has been described as where “games pervade all areas of life” and along with the cultivation of ludis bring about a rise of the gameful world (Walz et al. 2014). Statistics (Know, 2015) have indicated a large shift towards a ludification of culture, where games are becoming more the norm in cooperate business and even some aspects of modern day life. This brings about the issue of liminal and liminoid as to where the proper place of play and games are in social life (Deterding, 2011) as often “one works at the liminal and one plays at the liminoid (Turner, 1982).
Figure 1. Center for Codesign Research (2015)
The Gamification of products and services as an output is not the only part of the design process that can be Gamified. Gamification has been implemented in the methods, activities and engagement tools within various (co)design research projects as a set of design games. The use of game and play has been used to structure concept design activities “where the rules of the game become a drawing force in the dialogue rather than restricting creativity” (Brandt et al. 2004). The purpose of engagement tools such as scenario based approaches can be described as a way to “increase stakeholder’s sense of immersion” (Howard et al. 2002). It can also allow the “levelling of stakeholders from different interests leading to more constructive dialogue” making it more “independent of credentials” (Johansson, 2002) also supported by Eriksen et al. (2014). Brandt et al. (2004) describes in here use of scenario building games as a way for participants to “develop empathy for the users and the situations of use while elaborating on the design concepts”. Even the use of exploratory design games can “challenge conventional understandings and evoke the strange and unfamiliar” (Brandt et al. 2008). It has even been said that the role of design game pieces can be used as vehicles for expressing design moves (Brandt et al. 2004) and can be based on fieldwork that can be easier “for players to relate to and make sense of” (Brandt et al. 2008). As my understanding of the role of design games in the co-design process increased. I began to identify that Gamfied methods was more of a general co-design practice in many cases, where the innovation lies with the particular method being employed.
Topic Research: Gamified methods in co-design

NEW-LIMINAL
(COLLECTIVE)

PAIDIA

LUDIC

LIMINOID
(INDIVIDUAL)

-14-
In order to understand the most appropriate methods for this project I analysed various design activities shown on page 14 by mapping them along an axes inspired by Walz et al. (2014). Within this axes are the two poles of play along with the collective (liminal) and individual (liminoid) (Deterding et al. 2011). These two axes have a good way of categorising and breaking up the collective and the individual similar to the two poles of play. During this process of identifying and mapping the activities, most tended to have a more collective nature to them and pointed towards more creative and play type characteristics, examples including make tools (Dodero et al. 2014) and enacting activities (Brandt et al. 2004). This process allowed me to scope the nature of several types of (gamified) design activities that have been implemented across various research projects. In generated insight into what methods would be more flexible and promote exploration and others that are more strict and rule based. It was also important to gear towards more collective type activities that would promote teamwork and collaboration.
As my project progressed towards generating a Gamified method for co-designing with children, it was essential that I further understood what design activities have been successfully undertaken before with this age group. It has been said that “children have unconventional viewpoints on even the most complicated matters and are always ready to share their thoughts” and have “differing abilities to express their ideas” making them natural partners for being participants in co-design (Vaajakallio et al. 2009). The game activity structure can be crucial in supporting children into a more open collaboration and the “structure of the session influences the ability of realising a creative mood and generating design ideas” (Vaajakallio et al. 2009). Vaajakallio et al. (2009) has also suggested that designing various stages as missions placed as an “evolving structure that starts with a sensitizing pre-task” can create a framework for the other activities. Melonio et al. (2013) describes the use of generative methods as an early part of design process that should evolve into more formative ones such as layered elaboration (Walsh et al. 2010) and make tools (Vaajakallio et al. 2009), which are considered extended innovative methods within co-design (Melenio et al. 2013). The study of these tested methods allowed me to identify how practitioners had overcome challenges when working with children and how their methods should be changed following their reflection of them.
“Children have unconventional viewpoints on even the most complicated matters and are always ready to share their thoughts” (Vaajakallio et al. 2009)
**MAKE TOOLS** Vaajakallio et al. (2009)
- Facilitates more equal participation among children
- Gamified structure can support more active collaboration to access the materials

**EMBODIED NARRATIVES** Diaz et al. (2012)
- Facilitates iterative & rapid co-creation that removes the stress from differing skill sets and the fear of prototyping of solutions.
- Increase children's freedom to communicate and express their perceptions of the real world.

**LAYERED ELABORATION** Walsh et al. (2010)
- Cost effective to produce
- Not-destructive due to its layered development.
- Portable due to simple requirements
- Iterative & relatively rapid as many can contribute in a short time

**GAMIFIED CO-DESIGN** Dodero et al. (2014)
- Tangibly Gamified with missions displayed with teams on a progressivon bar.
- Competitive teamwork towards tree puzzle finish
- Fake currency earned from each mission can be used to buy materials at a shop
Examining Methods through Case Studies

During my case study research I managed to break down a selection of appropriate formative methods that included;

- Make tools (Vaajakallio et al. 2009), have been described as being “developed to amplify peoples creativitity and support their ideation in co-design” (Melo-nio et al. 2013) Melonio et al. (2013) has also stated that “children are motivat-ed and enthusiastic when using physical objects and creating tangible proto-types”. Motivation could be achieved through more interactive user generated activities with tangible objects.

- Embodied Narratives (Diaz et al. 2012) is a method to “stimulate dialogue and conversations through embodied interaction” that “promotes open and inter-changeable roles and does not require a plot outline”. I found this technique an interesting approach as it could enable kids to build their own narratives from the way they perceive the world (Diaz et al. 2012).

- Layered Elaboration (Walsh et al. 2010) is described as a variant of coopera-tive inquiry that aims to generate ideas through an iterative co-design process (Melonio et al. 2013). The method has the benefit of being “relatively rapid because it allows a number of design partners to provide insight and ideas in a short amount of time” (Melonio et al. 2013) promoting creating and sharing.

- Dodero et al. (2014) describes the use of a Gamified co-design method that mixes with make tools creating stages are structured as missions and players can earn rewards that allow them to purchase special materials. This method uses group challenges to voting and presentations where groups can demon-strate their prototypes development at various stages.
Topic Research: Co-design workshops with children

- Adaptive
- Flexible
- Customisable

Faulkner (2011)

Motivational Affordances

Psychological Outcomes

Behavioural Outcomes

Hamari et al. (2014)

Storyboard

Debriefing

Exploring

Sharing

Performing

Printing

Shooting

Diaz et al. (2012)

Player Types

Extrinsic

Intrinsic

Balance

Motivations

Dodero et al. (2014)
It has also been said that “Gamified methods can be effectively engaging for learning if Gamified learning activities have clear goals and knowledge of participants” (Dodero et al. 2014), this can be achieved through firstly learning what types of learners they are and then organising the “co-design activity in tasks as missions with game based activities adequate to players” (Dodero et al. 2014). This produces the ability to foster social inclusion and cooperation among players in the activity, which is an important goal of co-design activities. It was found that the creation of activities as missions crafted according to players involved could balance extrinsic and intrinsic motivation elements and other typical game elements made into challenges with these (Dodero et al. 2014). I was starting understand that this ludic arrangement of the co-design process facilitated by playful (paidia) characteristics could be enough to strike a balance between the two types of motivations in the Gamified elements of a co-design activity as described by Dodero et al. (2014). In exploring children’s creative narratives Faulkner (2011) states in his findings that activities should be “adaptive, flexible, and customisable if it is to support children’s own narrative activity and creative collaboration”. It was also understood that the game structure and rules should not be too complicated for children to understand in order to avoid disinterest before interaction can be initiated and then sustained (Vaajakallio et al. 2010).
**STRENGTHS**
- They can work with various age groups
- Layers of positive engaging experiences
- Immersion / deep concentration
- Provides intrinsic fun
- Independent of credentials: levels stakeholders
- Provides extrinsic rewards
- Fosters cooperation

**WEAKNESSES**
- Easy to get wrong
- Rewards can increase competition in groups
- Losing doesn’t help motivation
- Repetition can reduce interest

**OPPORTUNITIES**
- Increasing performance
- Increase inter-team cooperation
- Can lead to participants feeling competent and autonomous
- Evoke the strange and unfamiliar
- It can get in the way if too entertaining

**THREATS**
- If poorly done, perception of content can be tainted
- If poorly done, perception of content can be tainted

- If poorly done, perception of content can be tainted
As the focus of my project was on generating a Gamified method for co-design with children it was important for me to break down the existing positive and negative aspects of using such a method within my context. A SWOT analysis was used for this task and allowed me to understand some of the potential challenges I would face when structuring such a method for the group of children. As well as the challenges the possible opportunities that could be realised from such a method. These could include an increase in engagement and inter-team cooperation which have been identified in several case studies. This research activity allowed me to make some final conclusions of my research into the topic in order to take forward some of the strengths of this approach while still being aware of its weaknesses.
“Children explore the world around them & develop”

“Childrens play must be freely chosen, personally driven and intrinsically motivated” (Play Scotland, 2015)
As a final part part of my desk research into Paidia the playful side of Gamification with children in Scotland. It has been said that “Play is an essential part of every child’s life and is vital to their development. Through play, children explore the world around them, develop and practise skills (Play Scotland, 2015). “Play is essential for physical and emotional growth, for mental, intellectual and educational development, and for acquiring social and behavioural skills. Play is a generic term applied to a wide range of activities and behaviours that are satisfying to the child, creative for the child and freely chosen by the child” (Play Scotland, 2015). Play makes an ideal and appropriate topic to frame my gamified method around considering the flexibility of the Burnhill groups weekly themes. With the benefits of play it would be interesting to see how using a playful approach to design for play would work as part of the purpose of the activity, providing children with ways of identifying how they can discover new opportunities for better playing in their own neighbourhood. It has been stated that the “children’s play must be freely chosen, personally driven and intrinsically motivated” (Play Scotland, 2015). This presents a challenge for my method considering my own agenda for my research project implies some rules and restrictions. However, the outcomes being freely generated and expressed by children through a design approach would provide this sense of intrinsically motivated creation. Using the insights into playful activities and the benefits of play, I could use this as inspiration for the ideation of concepts that would help set the necessary stages as playful missions for the children to explore and generate new ways of playing that they may not have experienced before as “playfulness during activity may help children to think about and reflect on the world in a way that is free of constraints” (Faulkner, 2011).
EXPLORE
02 MEETING STAKEHOLDERS

CONTEXT

FIELDWORK
They co-created and co-run a range of community orientated programmes in Campusland and Rutherglen.

Figure 5. Healthy n Happy Community Development Trust (2015)
Community organisations were chosen as the focus of this project primarily for their more open access and thinking when it comes to allowing work with students. ‘Healthy n Happy’ was an ideal organisation to work with considering that I had already established contact with them from a previous project. Healthy n Happy are a well-established community development trust in Rutherglen and Campuslang that exists for the benefit of their community and adjoining area of Cambuslang. They have a range of programmes that were co-developed and are co-run with members of the community. This provided a range of possible opportunities for my project to work with that depended on which programme would be most suitable for both them and also myself.
“THEY ARE A ROWDY BUNCH OF KIDS SO THE ACTIVITIES WILL REQUIRE SOME FLEXIBILITY”

Figure 7. Healthy n Happy Community Development Trust (2015)
When meeting the service manager Rebecca and Jan at Healthy n Happy I was able to further elaborate on my project and discuss how this could work within one of their current projects at Healthy n Happy. Originally a programme called Thinking Differently at Healthy n Happy was considered as a suitable match for my project, however, through discussion of time constraints and when they actually wished to start this programme it was decided that another group could possibly be a better match. This was how Healthy n Happy’s Burnhill Childrens Group was chosen as an appropriate and still feasible programme within the time constraints of this project that would allow me to design for and test my project within as a case study. In this meeting I was able to find out a little bit more about the group I would be working with and it was made clear that some level of flexibility was needed to be considered, as not only is there an age difference that can range considerably and the drop in nature of the group means children can come and go at different times. The group itself was described as being a bit rowdy, meaning that I would be in for a challenge to keep them on task.
DEFINE
DEFINING A GENERIC FRAMEWORK
This generic framework was used to devise a set of guiding principles for the ideation of several concept Gamified co-design activities. This framework allowed me to utilise methods that had been previously used and tested with children through various studied research projects. This framework was used as a guide to help me identify the various components that would need to be considered in each concept activity. In order to achieve a balance between intrinsic and extrinsic motivations during the interactions planned within an activity. The activity needs to be crafted (Dodero et al. 2014) for all four different player types that may participate (Lazzaro, N. 2005). The purpose of achieving a balance between these types of motivations is to increase cooperation, performance and engagement from participants that can be used as measurements of success. I felt this generic framework would provide me with the time and opportunity to start considering the most suitable methods and activities that had been previously studied and mapped out towards my chosen context/target group.

**Aimed objectives: To be increased through activities by achieving a balance between intrinsic and extrinsic motivations.**
DEVELOP
04 IDEATION FROM GENERIC FRAMEWORK
DEVELOPING CONCEPT METHODS
The ideation phase followed the approach of using a framework for generating conceptual co-design activities with children. This approach was chosen most specifically due to time constraints between meeting the group of children and testing the generated activities. This constraint made it necessary to use the body of research and insights gained during my discussion with staff at Healthy n Happy to progress with some initial idea generation, a process that in most projects should come after the final conclusions from all fieldwork with the intended target audience. However, as part of my project process it was always my intention to analyse these concepts with the insights gathered from further fieldwork in order to identify the elements of each concept that would and wouldn’t work with the intended participants. The concepts reflected a range of design games and activities that were found as methods used in design research with children such as formative craft and drawing methods using make tools (Vaajakallio et. al. 2009). Each concept was generated to contain elements relating to the types of player characteristics; easy or hard fun, altered state and people factored (Lazzaro, 2005). These player types included in the framework helped me consider how each game should reflect the types of roles children may want to fill and included elements in the activity that would try and suit each of them.

Refer to appendix page for concept breakdown (72 - 75)
EXPLORE
Meeting the group two weeks later as a participant observer along with the support workers in this group I was able to gain some insight as to how they interacted and engaged with the activities and each other during the session. Some of the main points I noted included; the age difference in the group and how younger ones tended to behave better, but tended to require more assistance with understanding tasks and older ones of whom some misbehaved more and tended to need assistance keeping engaged with work. It was also identified that the structure of the activities along with timings and objectives would play a large part in trying to achieve the challenges identified from working with the children. Children also lost engagement when involved with tasks over too long a duration especially if the entertainment value doesn’t achieve a level of immersion to retain attention. The group itself was described as a mix each week with variations in attendance and children coming in at different times, along with the mix of different types of characters in the group there was an emphasis by Jane for a need for flexibility with the activities to be designed. Other insights included; concerns with space as this session and the planned one the following week will be conducted in a smaller meeting room with desks and chairs, a desire for competition between groups that was observed during a game of bingo around their topic of international friendships fostered more excitement and desire to complete the task at hand. I was also told that each week has a different topic, that provided me with the flexibility to design my activities around various previous topics or one that can be suitable for children.
COMMUNITY CONTEXT FOCUS

- HOW DO CHILDREN ENGAGE WITH THE ACTIVITIES?
- HOW DO BEHAVIOURS & ATTITUDES AFFECT THE SESSION & OTHER CHILDREN?
- HOW DO CHILDREN COLLABORATE IN TEAMS & WORK INDIVIDUALLY?
REFINE
06
REFINED METHODS FROM ANALYSIS

REFINING CONCEPTS FROM ANALYSIS
The affinity mapping of data as a method of analysis drew out three main themes as challenges for designing potential activities with this type of group. It was observed that children often had various levels of attention towards a given task and its materials, which had a direct impact on their levels of engagement during the session. The attention levels differed between factors such as age, gender and any relationship children had with each other in the group such as friendship. This would mean when attention levels would drop, children would start to mess about or chat with their friends. The second theme was the session structure; this had an impact on engagement levels as a break in the flow of activities and tasks could result in loss of attention and then engagement. It was also described that 15 minutes was roughly the maximum amount of time the children would remain engaged for during a session task. The final theme was the balancing of competition and cooperation; it was identified that children would often have heightened levels of engagement with a given task when there is a outer group competitive element, however, to keep children working well within their group this should not foster intra group competition that would conflict with cooperation in the team. These three themes among other insights gathered from my time spent with this group of children all had a connection to retaining engagement with a focus on primarily intrinsic motivations from members of the group.
ENGAGEMENT

ATTENTION LEVELS
SESSION STRUCTURE
BALANCING COMPETITION & COOPERATION

THEME 1: ATTENTION LEVELS
THEME 2: SESSION STRUCTURE
THEME 3: BALANCING COMPETITION & COOPERATION
Using key themes from fieldwork to analyse concepts from generic framework to identify what works and what doesn't.
The three key themes that derived from analysing the insights gathered from my time spent with the Burnhill Childrens Group were used to analyse the conceptual activities previously generated during the ideation phase. This analysis focussed on what would be most suitable for the Burnhill Childrens Group considering various age groups, skills and interests as well as also considering space, time, and nature of the drop in session. The most important out of the three objectives for my prototype method/activities was retaining a certain level of engagement during the session. This analysis process involved placing post it notes on each concept outlining components for each conceptual session in order to identify potential problems relating to the structure and various characteristics within my participant group. My approach using the generic framework was crucial in the timing of my project both in order to understand the range of design activities that are suitable to children around their age group and to start considering the various options available as I only had a week between meeting the children and testing the set of activities with them.
DEVELOP
07 PROTOTYPING A METHOD

DEVELOPING ACTIVITIES
As an outcome of my concept analysis I was able to structure my prototype activities to reflect the insights and experiences gained from the previous session with this group. As I begin organising and prototyping my method, I placed the session within a specific context with the aim to co-design new types of playful games. As a mission for the children to discover new playful opportunities in their neighbourhood. The structure of the session included 4 short 15-minute challenges that build upon each other in order to retain enough engagement throughout the session. The freedom and creative aspects of generative and make tool methods (Melonio et al. 2013) influenced the specific choice of activities, however, with the time limit these had to be kept simple and follow more of a rapid prototyping approach.

For breakdown refer to appendix (76)
Prototype Activities

4 SHORT 15 MINUTE CHALLENGES THAT BUILD UPON EACH OTHER IN ORDER TO RETAIN ENGAGEMENT THROUGHOUT THE SESSION
IMPLEMENT
08
PROTOTYPE METHOD TESTING

CO-DESIGN ACTIVITIES
Prototype Method Testing / Evaluation

Children dropped in at various times.

Activities working for younger kids didn't work as well for older ones.
The co-design session as expected didn’t go entirely to plan. There were elements of success, but also many areas for improvement. This particular group presented various design challenges. Some of these were new compared to those observed in the previous session. Again even with the learning from the first session and designing in flexibility there were some unexpected challenges. This groups large mix of age groups and nature of the drop in type session presented some of the biggest challenges for structuring co-design activities with this group. The children don’t have to come and with a large list of children registered the amount can be twelve like the previous week or up to twenty like this one. The children drop in at various times making it difficult to get them to catch up when others are nearly finished the activity. The mix of ages itself was the biggest concern as activities that worked for younger children from five to eight did not work as well in terms of engagement for those ten to twelve age groups. The older children were less inclined to participate in drawing like the younger children and lost engagement with the activity half way through. The space itself presented a challenge as having planned the activities for a small space with many desks, this was changed at the last minute to a large, open space with a few tables. It also had an echo that amplified noise meant I had to have some degree of flexibility and improvise with my final activity. I felt the requirement for my project to include co-design limited this sessions ability to be as fun and engaging and would have benefited from an approach were actual playing would have been the driving force for intrinsic motivations rather than just thinking about play.
I felt that the generative approach (Melonio et al. 2013) would have been more suitable for the session considering its flexibility, however, this method lacked the affordances for playful behaviour between groups. The chosen approach in contrast to a more formalised rule based co-design game with particular props and a board was specifically ruled out due to the variable in the number of kids from week to week. Using the terms ‘Engagement, Performance and cooperation’ (Dodero et al. 2014) during testing the sessions approach as measurements I was able to identify areas of both success and areas of improvement. The level of engagement fluctuated throughout the session mostly for the older children in the group. The first activity was unexpectedly started by the development worker, but helped to get the children thinking of the context of today’s session. In groups of three the second activity using the maps and stickers for identifying places and the activities the children play managed to build some engagement through participation. However, the balance of challenge between ages created problems as some older children finished early and had to wait for something to do, while younger children spent more time trying to catch up, requiring more help from the support workers. The performance of this activity was probably the highest along with levels of cooperation. When the third activity had started further younger children had began to arrive. The older children took some encouragement to come up with ideas for this activity and were reluctant to draw their ideas apart from various doodles, which compared to the younger children who tried to draw their ideas more than write.
A degree of flexibility in order to improvise. Some would groups finished before others. Younger kids were more inclined to draw.
There were some levels of cooperation within this activity for a brief moment; however, with the time waiting for the next activity to start and other children to catch up there was significant drops in engagement from older children. I found this drop made it even more difficult for the development workers and myself to get the attention of the children. As they started to get too busy chatting amongst each other, the time was nearly up and most children decided to leave before the final activity could be started. The timings of the activity being spaced within only one hour forced the activities to be quick and limited the ability to expand and flush out ideas. This was found more pressing by the younger children who dropped in later on in the session.
A degree of flexibility in order to improvise

Some would groups finished before others

Younger kids more inclined to draw
09
REFINED PROTOTYPE METHOD

SPECULATIVE DEVELOPMENT
Mission 1: What do you find playful?
In this first pre-activity children would introduce themselves and describe what they find fun. This activity is intended to get everyone thinking about the context of the session, while settling children down before starting a more creative atmosphere.

5 Minutes

Mission 2: Where do you have fun?
In this second activity children are broken into certain age groups and tasked with finding specific places on a large map that they like to play and write down on post it notes what they do. Children in each group only have so many stickers and post it notes to place, and are told there is a time limit.

10 Minutes
Mission 3: With these toys make a new game can you play.

The last activity involves children within their groups being given two toys/objects to play with and are tasked to come up with a new game to play. There is also a time limit and a the fastest and most original idea gets a reward to share.

20 Minutes

Mission 4: Share the best game.

As a final part of this activity children in the winning group have a special task to teach the other groups how they can play this game.

20 Minutes
When testing the co-design method I was presented with various challenges that provide insight into how these activities could be improved. I found that there was too much focus on the game design element rather than designing for what was intrinsically motivating. Within the activities there should be a greater emphasis on directly playful elements. As this group is not in a formal learning environment, having fun is the driving (intrinsic) motivation to achieving engagement during the co-design activities. This means generative activities needed to better promote playful interactions. This method within the context of encouraging children with only a few rules as guidelines to explore and generate a new outdoor game could produce somewhat a more co-directed fun and playful set behaviours yet without minimizing restrictions on playful creativity. This refined process around the specific group would be intended to increase the performance of this group during such a co-design session by increasing the playful elements and reduce the generative content. The notion of making a game to make games was a fun prospect and specifically chosen as I felt it would be more engaging for the children than various other topics. This refinement Gamified method would require further prototyping and development, breaking down the structure further and identifying various contingencies when things don’t go to plan. However, it does provide a notion of a conceptual approach to working with children outwith formal learning and home environments where a facilitator would need to work extremely hard to motivate children through engaging activities.
The focus of this project was research through design in order to understand the nature of Gamification and how it can be applied as a method within a design process. In this exploration I discovered that Gamified methods already existed across various fields of research in the form of design games. As my research developed I began to focus on how Gamified methods have successfully motivated and engaged participants within co-design activities in communities. In order to capture the essence of Gamified tools and processes I needed to analyse the range of methods that have been employed to break them down and identify how they could work. For my project I designed this method and activities for a specific group as a case study, which lead me to focussing in particular on community lead organisations. Upon successfully meeting a community organisation it became evident that one of their children programmes would be the most suitable group for my project considering my timescales. This direction required further desk research before I could come to any final conclusions before I started to develop my ideas. It was crucial to identify how such design activities have involved children in practice. Through this I conducted some case study research into several projects involving Gamified design activities with children primarily within a cooperative learning context. Along with previous research there were many links to achieving intrinsic and extrinsic motivations that are an integral part of Gamification and indeed towards achieving engagement. The conclusions of my research influenced the formation of a generic framework that aimed to balance these two types of motivations through designing for four types of player groups in order to achieve an increase in engagement, performance and cooperation throughout the activities. The purpose of this generic framework was to start
an initial phase of ideation using the knowledge of methods previously studied and initial insights gained through discussions with the organisation. After meeting the children’s group during one of their weekly activities I was able to identify a set of insights towards generating and retaining engagement, which were used to analyse the concepts from the ideation phase. This analysis provided me with the crucial final step that was necessary to conclude the structure of activities to prototype my Gamified method. Upon testing these activities with this group in the following week I was able to identify what worked well and what didn’t, which was presented as a set of challenges. I used this opportunity to conclude my project with a second iteration of development to speculate on how these challenges could be overcome. In concluding this project I found myself with more questions than answers, and with only being able to test a small component of a Gamified activity I was unable to explore the depths and possibilities of Gamification within the co-design practices. However, I feel I have become more aware of the potential that Gamification has for engagement and mediating playful behaviour not only in co-design workshops, but other areas of life. The rhetorics of play and the gameful world in terms of the ludification of culture and society has been described as where “games pervade all arenas of life” and along with the cultivation of ludis bring about a rise of the gameful world (Walz et al. 2014). A strong sentiment indeed, but with estimates that over 50% of organisations managing innovation processes would be Gamifying parts of their business by 2015 (Gartner, 2011) and a rise of its use in research literature (Hamari et al. 2014) it can be argued that there is a significant interest in the use of games across a range of sectors.


Stickdorn, M. and Schneider, J. (n.d.). THIS IS SERVICE DESIGN THINKING.


Appendix: Ideation From Generic Framework Breakdown

Concept: Discover Your Inspiration

This concept involves using a set local issue cards along with a set of inspiration cards to generate ideas as solutions to these issues. Players in this activity work in teams to solve the problems and then can work in either teams or individually to draw or craft their solutions to these problems.

Concept: Wheel of Possibilities

This activity involves the spinning of a three-layered wheel of solutions in order to identify a random challenge from a set of pre-defined characters, moments and problems. The wheel of fortune could be placed in one location for all to use in turns or for individual groups. Once a challenge has been randomly selected in a group or individually the participants are to craft or draw solutions to the challenge they have.
Participants are asked to identify a moment in their day that if they wanted to change. In the next part of this activity they are then tasked to draw on two moment cards the problem that they wanted to change and what they would like to see as their new moment. Placing these one above the other (problem / change) as a group they have to identify ways in which they could make this happen; such as what they would need to obtain or have to realise this moment.

Concept: Your Story

This activity involves the use of a set of pre-defined characters/personas that the particular group can relate to where the participants have to draw out a series of moments to generate a story of their day. The final phase of this activity involves participants swapping stories and discussion how they could improve the characters day.
Appendix: Ideation From Generic Framework Breakdown

**Concept: Generating Futures**

This activity involves participants playing a four-sided board game that aims to get them to generate scenarios with pre-set characters and moment cards by laying them on the board. Once complete a discussion among players helps them identify whether the moment cards match up to complete a story or not. A blank issue card is used for participants to write down any spotted issues. The final part of this game is to draw or craft a new moment as a solution to make these stories complete.

**Concept: Your Local Mission**

In this activity participants are tasked to map out separately all the things they like and dislike in their local neighbourhood. Once complete participants have to match these together and finally pick the top three. Then they individually craft or draw their solutions to these connections and as a group try and see how they can combine components of their solutions in order to make it more realistic and maximise its benefit.
Concept:

This concept children get into small groups and write down what they find fun and why it is fun using a template as a pre-activity. They then use the spinning wheel to randomly select a challenge (mostly of bored kids in the area). Once a challenge is selected, children are then to draw or craft the activity they could do for fun in that specific space and with the objects available in the pictures. Then finally children demonstrate the activity they have made up or describe it.

EASY FUN  ALTERED STATE  PEOPLE FACTORED
To break down the four activities the first one starts as quick simple pre-activity going around the table asking everyone their name and their most fun game to play outside. This type of activity was included within the previous session and was shown to get children relaxed and has been shown to create a framework for the rest of the activities and get children in a creative mood (Vaajakallio et al. 2009). The second activity aimed to use the participant’s knowledge of their area, in order to think of what they play for fun in these spaces using stickers and either writing or drawing to describe what they are. This challenge was chosen, as it provides a relatively simple thinking type activity for various ages to identify where and how they play. The third challenge using prop cards to imagine various types of ways to play with them was to allow children to use their imagination to explore the various ways they play with specific toys such as hoops and balls. The prop cards included in this third challenge were chosen as they provide examples for children to visualise and choose from. In the forth challenge children are to then use these previous activities and types of play to re-design their spaces to enable them to be more playful. The chosen challenges were designed to be simple, yet allow children to be as creative as they wished while still containing specific rules and using props as a guides through each stage.
What could be next with this co-design group?

As this project was focusing on experimenting and testing a Gamified co-design method within this context as a case study and not using as a project focus, there are various possibilities for ‘what could be next’ out with further refinement of the method that could be discussed. As I was able to get some ideas of the types of games these children like to play and within the particular areas. A possible next step would have been going back the kids for another co-design session that would progress from the last one and build upon the insights gained from the session/workshop conducted. Another possibility could have been to create a scaled model of the space or a drawing on large pieces of paper with the changes to the spaces, encouraging children to enact the types of games they would play. The playful experimentation for new games would have also been an interesting opportunity to further expand on this method. As a better understanding of what children like to play and how they formalise games would be crucial to further understanding how the method of Gamified co-design activities could better meet the requirement for playful fun that engages the children to participate.
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